

Conclusions

Because the 1996 Act allows farmers nearly complete planting flexibility, own- and cross-price acreage elasticities (measures of a producer's production/acreage response to changes in crop prices) for major U.S. field crops are greater, in most cases, under the 1996 Act than those estimated under previous legislation. The increase in acreage price elasticities over previous legislation (especially compared with those estimated for 1986-90) reflects the 1996 Act's removal of both the institutional barriers (including base acreage protection) and the economic barriers (concerns over government payments) to greater planting flexibility for crop producers.

In percentage terms, cross-price acreage elasticities estimated under the 1996 Act generally increase even more than own-price elasticities. This implies that farm commodity programs in the past might have restricted acreage shifts from program crops to other crops.

Simulation results using a U.S. agricultural sector model indicate that the aggregate impact of the 1996 Act on area planted to the eight major field crops (wheat, corn, sorghum, barley, oats, soybeans, cotton, and rice) is small when compared with plantings under a continuation of the 1990 Act. The effect of the 1996 Act on planted acreage for individual crops differs by commodity and has the least impact on U.S. wheat acreage. Due to small changes in acreage price elasticities between the 1996 Act and 1990 Act, U.S. wheat planted acreage under the 1996 Act scenario, on average, differs very little during the 1996-2005 simulation period from the 1990 Act baseline. Corn acreage expansion in the Central and Northern Plains, a long-term trend in this important wheat production region, would contract under the 1996 Act. In contrast, soybean acreage expansion in this region would accelerate under the 1996 Act.

The change in farm legislation is simulated to have its biggest acreage impact on soybeans—an increase of over 2 million acres under the 1996 Act through the 1996-2005 simulation period. Nearly full planting flexibility allows corn producers to make a switch from corn to soybeans. Greater planting flexibility under the 1996 Act would lower corn planted acreage by an average of 1-2 million acres from the 1990 Act baseline but increase upland cotton acreage by 0.7 million acres.

The effect of the farm legislation change on regional production patterns of major field crops varies, ranging from the smallest for wheat to a more noticeable change for cotton. Overall, the effect appears to be modest. Due to a small change in wheat acreage price elasticities from the 1996 Act across production regions, regional production patterns for U.S. wheat would remain largely unchanged. Corn production would be slightly more concentrated in the North Central and Southeast and Delta regions. In contrast, soybean production would be slightly less concentrated in the North Central region. In the case of cotton production, the Southeast stands to gain a larger share of U.S. acreage under the 1996 Act at the expense of the Southern Plains.

The effects of the change in 1996 farm legislation on crop acreage were initially estimated under market conditions with relatively high farm commodity prices. However, these program effects remain largely the same under a lower price market conditions. The acreage response model (using acreage price elasticities estimated in this study), in general, performs well in forecasting planted acreage for major field crops. When the deviation between model forecasts and March planting intentions is significant, much of the difference can be attributed to nonprice factors, such as weather, crop fungus, or plant disease. The model does equally well in forecasting acreage response in both high-price and low-price scenarios.